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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,144	10/22/2004	Morihisa Momona	NEC03P013-SIb	2330

21254 7590 12/27/2007

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER	
LAM, JOSEPH M	

ART UNIT	PAPER NUMBER
4183	

MAIL DATE	DELIVERY MODE
12/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/512,144	MOMONA, MORIHISA	
	Examiner	Art Unit	
	JOSEPH M. LAM	4183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 Octorber 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/03/2007, 10/22/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1- 4, 6, 7, 8 are rejected under 35 U.S.C 102(e) as being anticipated by Larson et al. (US 2003/0026229).

Regarding claim 1, Larson et al. teaches a mobile communication network system that comprises: a mobile communication network (see figure 1, element 212, 214,312, and 412), a plurality of external networks (see figure 1, element "PSTN 20", a plurality of mobile terminals (see figure 1, element 30), a plurality of gateways for connecting said external networks and said mobile communication network (figure 2, element 40A, 40B, 40C, 40D), and a plurality of radio access points for connecting said mobile terminals to said mobile communication network (see figure 1, element 200, 300, and 400), wherein, when packets are transmitted and received between said mobile terminals, the packets are communicated by way of virtual networks that are provided to correspond to each of said external networks on said mobile communication network (see figure 1 element 100).

Regarding claim 2, Larson et al. further teaches a mobile communication network system that comprises: a mobile communication network (see figure 1, element 212, 214,312, and 412), a plurality of external networks (see figure 1, element "PSTN 20", a plurality of mobile terminals (see figure 1, element 30), a plurality of mobile terminals (see figure 1, element 30), a plurality of gateways for connecting said external networks and said mobile communication network , (figure 2, element 40A, 40B, 40C, 40D) and a plurality of radio access points for connecting said mobile terminals to said mobile communication network (see figure 1, element 200, 300, and 400);

wherein: said mobile communication network is provided with means for offering virtual networks that correspond to each said external network (see figure 1, element 100 and element "PSTN 20"); said gateways are provided with means for connecting said external networks to corresponding said virtual networks (see figure 2, element 40A, and element 110) and (see figure 1, element 110 and element "PSTN 20"); and said mobile terminals are provided with means for setting sessions with said radio access points for any of said external networks(see figure 1, element 200, 300, and 400, element 30, and element PSTN 20); said radio access points are provided with: means for transferring packets that have been received from any of said sessions to a virtual network that has been prepared for an external network that corresponds to that session (see figure 1, element 210, and element 120); and means for transferring packets, which have been received from said virtual network that corresponds to any external network, to a session that has been set for said external network by said mobile terminal that is the destination of these packets (see page 2, paragraph [0016], and figure 1); and private leased line

connections are provided between said mobile terminals and said external networks, and when transmission or reception of packets is realized between said mobile terminals, the packets are communicated by way of virtual networks that are provided to correspond to each of said external networks on said mobile communication network (see page 3, paragraph [0019], and figure1).

Regarding claim 3, Larson et al. further teaches a mobile communication network system , wherein each of said radio access points is provided with: means for, when a said mobile terminal is to be handed over from a current radio access point to which it is currently connected to a new radio access point, transferring information of all sessions that said mobile terminal has set to the new radio access point (see figure 1, element 120 and 300(as a new radio access point)); and means for acquiring said setting information of sessions that is transmitted in from said current radio access point (see page 4, paragraph [0021]).

Regarding claim 4, Larson et al. further teaches a mobile communication network system, wherein: said mobile communication network further comprises a mobility management node that is made up of a plurality of virtual mobility management nodes that are each provided with: means that is prepared for each of said external networks for transmitting and receiving packets only with a said virtual network that has been prepared for use by a corresponding external network (see page 2, paragraph [0015]); means for holding positional information that has been reported from said mobile terminals (see page 2, paragraph [0016]); means for, when packets that are addressed

to said mobile terminals are received, transferring these packets to positions that have been reported from said mobile terminals (see page 4, paragraph [0025]); and wherein each of said mobile terminals is further provided with: means for reporting positional information to said virtual mobility management node that corresponds to said external network to which the mobile terminal is to be connected (see page 4, paragraph [0015] and [0016]).

Regarding claim 6, Larson et al. further teaches mobile communication method in a mobile communication system comprising: a mobile communication network (see figure 1, element 212, 214,312, and 412), a plurality of external networks (see figure 1, element "PSTN 20", a plurality of mobile terminals (see figure 1, element 30), a plurality of gateways for connecting said external networks and said mobile communication network (figure 2, element 40A, 40B, 40C, 40D), and a plurality of radio access points for connecting said mobile terminals to said mobile communication network (see figure 1, element 200, 300, and 400); said mobile communication method comprising steps wherein: a said mobile terminal sets a session for any of said external networks with said radio access point (page 1, paragraph [0003]); a said radio access point transfers packets that have been received from any said session to a virtual network that has been prepared for each of said external networks that corresponds to the session (see page 2, paragraph [0015]); and said radio access point transfers packets that have been received from said virtual network that corresponds to any external network to the

session that has been set for use of said external network by said mobile terminal that is the destination of the packets (see page 2, paragraph [0016]).

Regarding claim 7, Larson et al. further teaches a mobile communication method comprising steps wherein: when a said mobile terminal is to be handed over from a current radio access point to which it is currently connected to a new radio access point, said current radio access point transfers all of said session information that said mobile terminal has set to said new radio access point (see page 1, paragraph [0003]); and said new radio access point acquires from said current radio access point all of said session setting information that said mobile terminal has set (page1, paragraph [0004]).

Regarding claim 8, Larson et al. further teaches a mobile communication method comprising steps wherein: each of a plurality of virtual mobility management nodes that are prepared for each of said external networks and that together constitute a mobility management node that is provided within said mobile communication network transmits and receives packets only with a said virtual network that has been prepared for the use of a corresponding said external network (see page 2, paragraph [0015]); a said mobile terminal reports positional information to said virtual mobility management node that corresponds to said external network to which said mobile terminal is connected (see page 2, paragraph [0016]); each of said virtual mobility management nodes holds positional information that has been reported from said mobile terminal, and upon

receiving packets that are addressed to said mobile terminal, transfers these packets to the position that is reported from said mobile terminal (see page 2, paragraph [0017]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 5 , 9, 10, 11, 12, 13 are rejected under 35 U.S.C. § 103 (a) as being unpatentable as obvious over Larson et al. (U.S. 2003/0026229 A1) in view of Isomaki et al. (U.S. 2002/0176378 A1).

Larson et al. discloses a mobile communication network system, comprising the following:

- a control/management virtual network (see figure 1, element 100);

- means for transmitting and receiving, by way of said control/management virtual network, packets for control and management that are exchanged between nodes that are arranged within said mobile communication network and that include said radio access points and said mobility management nodes (see page 2, paragraph [0017]);
- packets for control and management that are transmitted and received between said radio access points, said mobility management nodes, and said gateways that are arranged within said mobile communication network are transmitted and received by way of a control/management virtual network that is provided within said mobile communication network (see page 2, paragraph [0016]);
- a control/management virtual network (see page 2, paragraph [0012], and figure 2);
- - means for transmitting and receiving, by way of said control/management virtual network, packets for control and management that are exchanged between nodes that are arranged within said mobile communication network and that include said radio access points and said mobility management nodes (see page 2, paragraph [0017]);
- a control/management virtual network (see page 2, paragraph [0012], figure 2);
- means for transmitting and receiving, by way of said control/management virtual network, packets for control and management that are exchanged between nodes that are arranged within said mobile communication network and that include said radio access points and said mobility management nodes (see page 2, paragraph [0016]);
- packets for control and management that are transmitted and received between said radio access points, said mobility management nodes, and said gateways that are arranged within said mobile communication network are transmitted and received by

way of a control/management virtual network that is provided within said mobile communication network (see page 2, paragraph [0015], [0016]), and [0017]);

Larson et al. fails to disclose, comprising the following:

- means for refusing packets for control and management that have been received from sources other than said control/management virtual network.
- a packets for control and management that have been received from a source other than said control/management virtual network are refused.
- means for refusing packets for control and management that have been received from sources other than said control/management virtual network.
- means for refusing packets for control and management that have been received from sources other than said control/management virtual network.
- means for refusing packets for control and management that have been received from sources other than said control/management virtual network.
- packets for control and management that have been received from a source other than said control/management virtual network are refused.

However, Hamilton et al. disclose in the same field of endeavor, the following:

- means for refusing packets for control and management that have been received from sources other than said control/management virtual network (see page 7, paragraph [0095]);
- means for control and management that have been received from a source other than said control/management virtual network are refused (see page 7, paragraph [0094], and [0095]);

- means for refusing packets for control and management that have been received from sources other than said control/management virtual network (see page 7, paragraph [0094], and [0095]);
- means for refusing packets for control and management that have been received from sources other than said control/management virtual network (see page 7, paragraph [0094], and [0095]);
- packets for control and management that have been received from a source other than said control/management virtual network are refused (see page 7, paragraph [0094], [0095] and [0114]).

Hamilton et al. discloses the above differences for the purpose of improving building packet- filtering and network based firewall to protect the mobile communication network (see page 7, paragraph [0094], and [0095]).

Therefore, It would have been obvious to one in the art at the time that the invention was made to combine the communication network system as described by Larson with the mean for refusing as taught by Hamilton, in order to enhance capability between external networks and mobile terminals, as well as packet-filtering and network based firewall.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Niska (US 6985734 B2), and Widegren et al. (US-2002/0062379 A1) references are also cited to show related art.

Inquiry

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH M. LAM whose telephone number is (571)270-1959. The examiner can normally be reached on Monday to Thursday from7:30 to 5:30 eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571- 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7 December 2007
Examiner: Joseph Lam
AU: 4183

/Joseph M Lam/

/Len Tran/

Supervisory Patent Examiner, Art Unit 4183